

## **Virtual Lab: Metric Measurement Lesson Using the Scanning Electron Microscope (SEM) Simulation**

### Sunshine State Standards

**SC.H.1.4.1** Knows that investigations are conducted to explore new phenomena, to check on previous results, to test how well a theory predicts, and to compare different theories.

**SC.F.1.4.2** Knows that body structures are uniquely designed and adapted for their function

**MA.B.1.4.3** Relates the concepts of measurement to similarity and proportionality in real-world situations.

**MA.B.2.4.1** Selects and uses direct (measured) or indirect (not measured) methods of measurement as appropriate.

**LA.A.1.4.4** Applies a variety of response strategies, including rereading, note taking, summarizing, outlining, writing a formal report, and relating what is read to his or her own experiences and feelings.

### National Education Technology Standards

Students practice responsible use of technology systems, information, and software.

Students develop positive attitudes toward technology uses that support lifelong learning, collaboration, personal pursuits, and productivity.

Students use technology tools to enhance learning, increase productivity, and promote creativity.

Students use technology resources for solving problems and making informed decisions

Students demonstrate a sound understanding of the nature and operation of technology systems.

Students are proficient in the use of technology

### **Objectives:**

1. The student will be able to determine the metric units being used to measure the object or parts of the object.
2. The student will be able to demonstrate proficiency in manipulating the computer technology software.
3. The student will be able to use the computer measurement bar to measure various objects in the Virtual SEM.
4. The student will use the scientific method to solve a problem.
5. The student will be able to convert between millimeters and micrometers.